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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------------------|------------------|
| 10/809,054 | 03/25/2004 | David M. Chickering | MS192074.1 / MSFTP575US | 6980 |
| 27195 7590 01/10/2007 AMIN, TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114 | | | EXAMINER ROBINSON, GRETA LEE | |
| | | | ART UNIT 2168 | PAPER NUMBER |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | | MAIL DATE | DELIVERY MODE |
| 3 MONTHS | | | 01/10/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/809,054

Applicant(s)

CHICKERING, DAVID M.

Examiner

Greta L. Robinson

Art Unit

2168

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10 and 12-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 3-10 and 12-29 are pending in the present application.
2. Claims 2 and 11 have been cancelled. Claims 1, 3, 7-10, 12, 24, 27 and 29 have been amended.

Drawings

3. The drawings were received on October 30, 2006. These drawings are acceptable.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 10, 12-27 and 29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims appear to be drawn to an abstract idea that does not comprise a useful, concrete tangible result. Regarding independent claim 10, the claim recites a "inputting a complete data set into a Bayesian network constructor for analysis", however the analysis does not present a result to the end-user of the analysis. Also it is unclear as to what element is inputting the data. Independent claims 24 and 27 do not present any type of

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functionality and it is not clear as to how the data packet is implemented. Claims 12-23, 25 and 26 are rejected based on dependency.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 10, 12-23 and 29 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: means for displaying results of learning Bayesian networks or displaying results.

8. Claims 1, 3-10, 12-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claims 1, 10, 24 and 27 the following limitation is vague: "computer-readable medium". The examiner suggests computer-readable storage medium for clarity. Claims 3-9, 12-23, 25, 26 and 28 are rejected based on dependency.

Regarding claim 10 the following limitation is vague: "inputting a complete data set" [see claim 10 line 3]. It is unclear as to what element the complete data set is input and how it is input. Claims 12-23 are rejected based on dependency.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hulten et al. *Learning Bayesian Networks From Dependency Networks: A Preliminary Study*.

Regarding claim 27, **Hulten et al.** teaches a computer-readable medium having stored thereon a data packet transmitted between two or more computer components that facilitate data access, the data packet comprising data set information useable for learning Bayesian network with decision trees, based, in part, on Bayesian network with complete data tables, wherein a search algorithm is employed to reverse edges in the Bayesian network with complete data tables [note: abstract our approach is to learn Bayesian network; page 2 left hand column first 3 paragraphs we learn dependency network from (complete) data; page 3 left hand column paragraph 2 constructing the Bayesian network; and Section 3.2 The DN2BN Algorithm].

The limitations of claims 24-26 are similar to that encompassed in claim 27; and is therefore rejected under the same rationale.

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by

Pelikan et al. US Patent 7,047,169 B2.

Regarding claim 27, Pelikan et al. teaches a computer-readable medium having stored thereon a data packet transmitted between two or more computer components that facilitate data access, the data packet comprising data set information useable for learning Bayesian network with decision trees, based, in part, on Bayesian network with complete data tables, wherein a search algorithm is employed to reverse edges in the Bayesian network with complete data tables [note: column 10 line 26 through column 11 line 48; column 20 line 61 through column 22 line 14 “constructing a Bayesian network that comprises decision graphs”].

The limitations of claims 24-26 are similar to that encompassed in claim 27; and is therefore rejected under the same rationale.

Response to Arguments

13. Applicant's arguments with respect to claims 1, 3-10 and 12-29 have been considered but are moot in view of the new ground(s) of rejection.

In the remarks section of the response Applicant argued the amendment to the claims overcomes the rejections cited under 35 USC 101 and 35 USC 112 second, however new rejections have been made note citations supra.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zhang et al. *Learning Bayesian Network Classifiers from data with Missing Values*

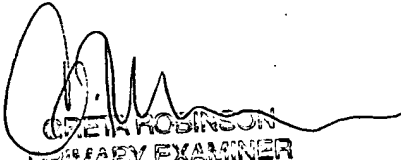
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Greta Robinson
PRIMARY EXAMINER

Greta Robinson
Primary Examiner
January 6, 2007